

Appendix D

USACE FATE Model Parameters and Results for Dredged Material Deposition Simulation

Daily Average Wave Height Offshore MCR for 1985-2005 (NOAA)
Compared to Hourly Observations for 2003 and 2005

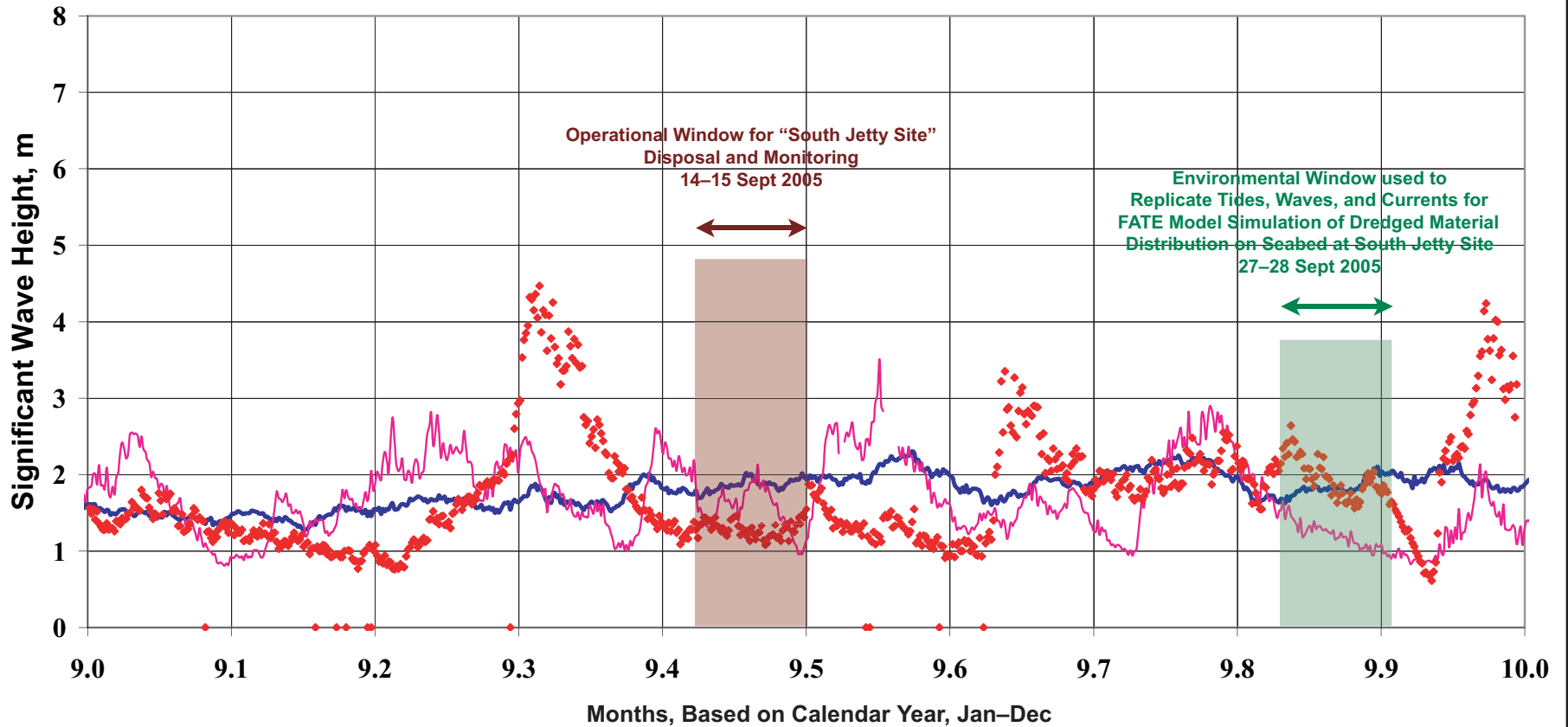


Figure D-1. Daily Average Wave Height Offshore MCR



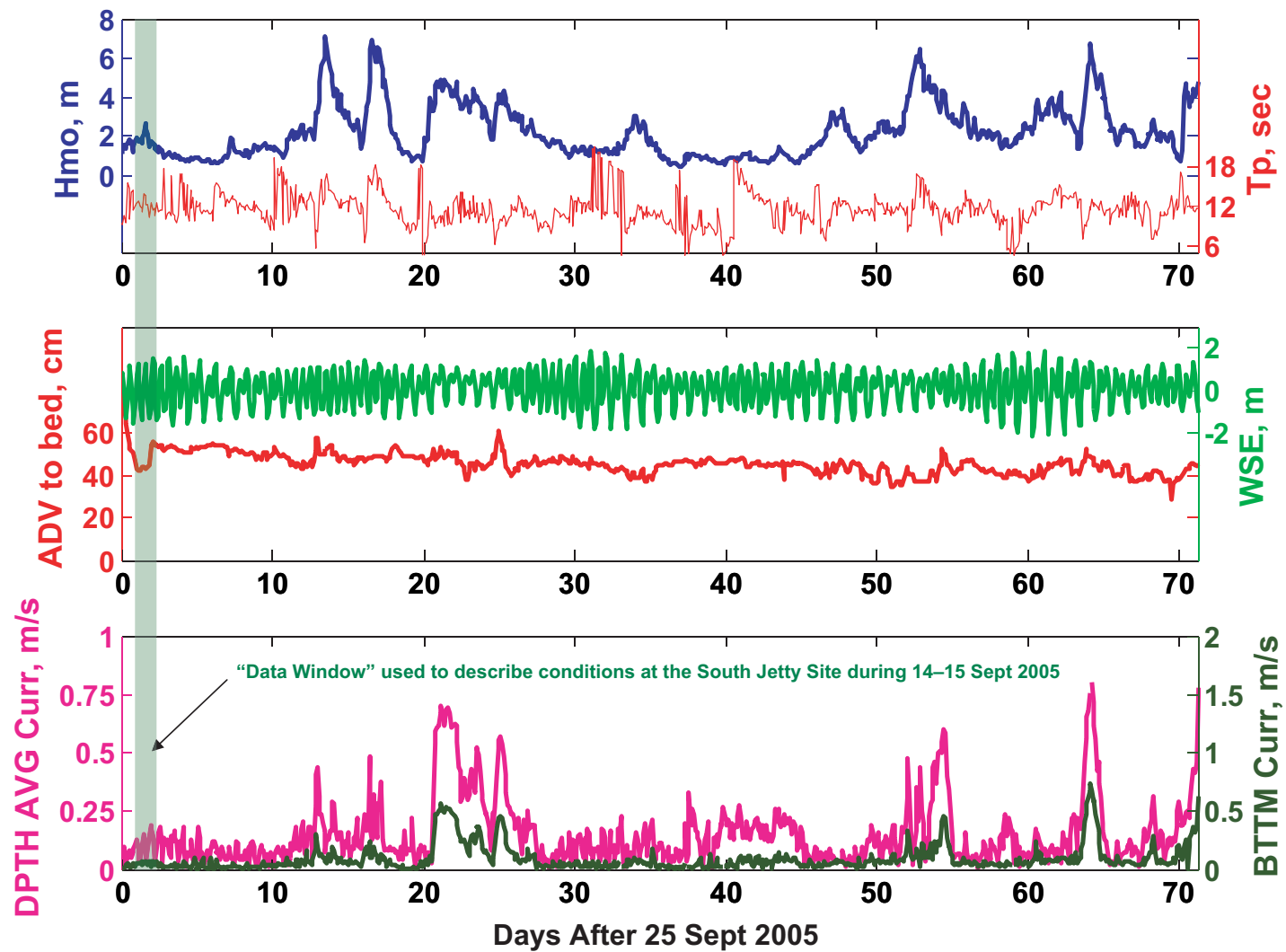


Figure D-2. 2003 Data at South Jetty Site



South Jetty Demonstration Dredged Material Placement Timing with Tidal Cycle for 2003 and 2005

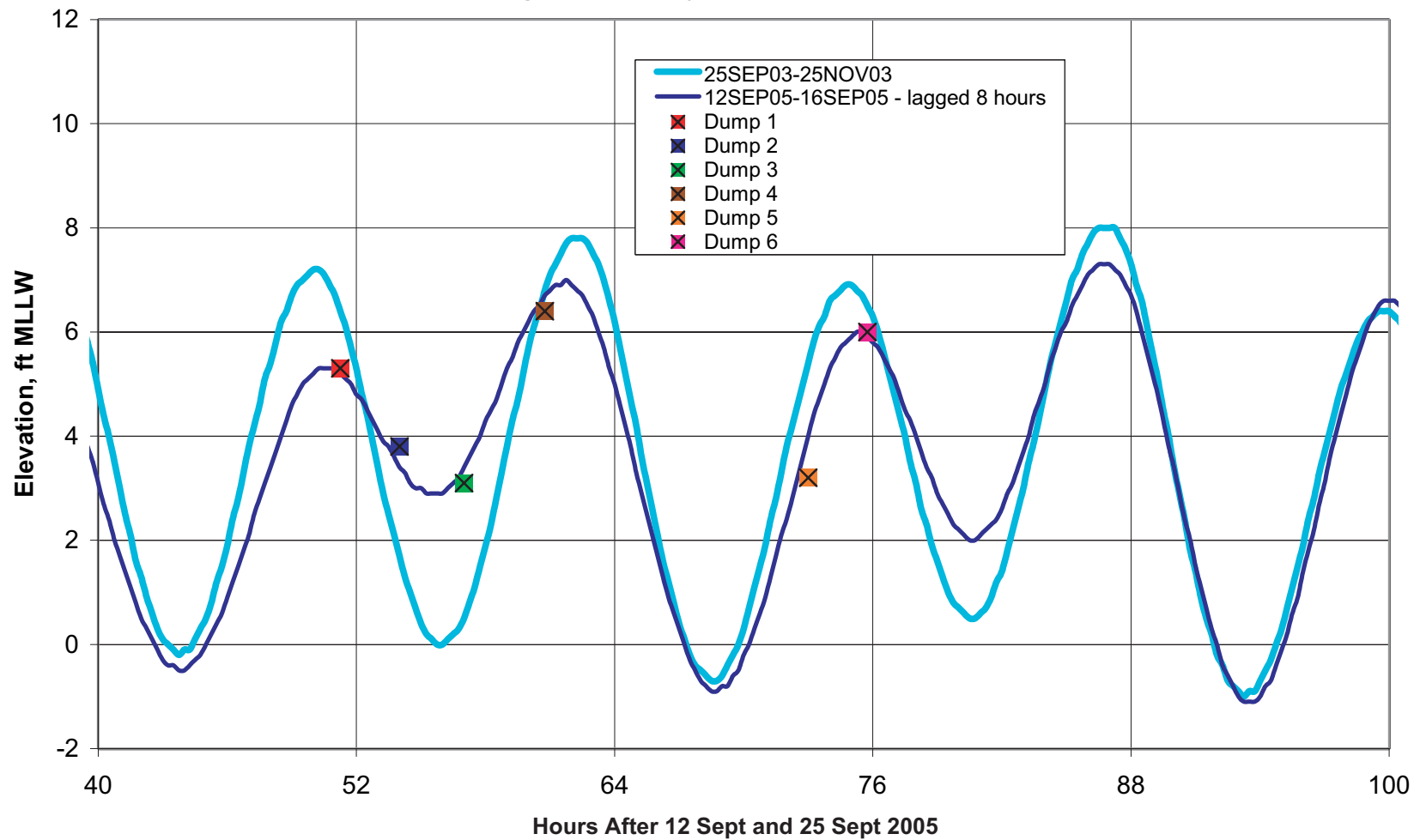


Figure D-3. South Jetty Demonstration Dredged Material Placement
Timing with Tidal Cycle for 2003 and 2005



Results indicated that during Sept–Dec 2003, currents through the water column at the South Jetty Site were flowing mainly to the WEST.

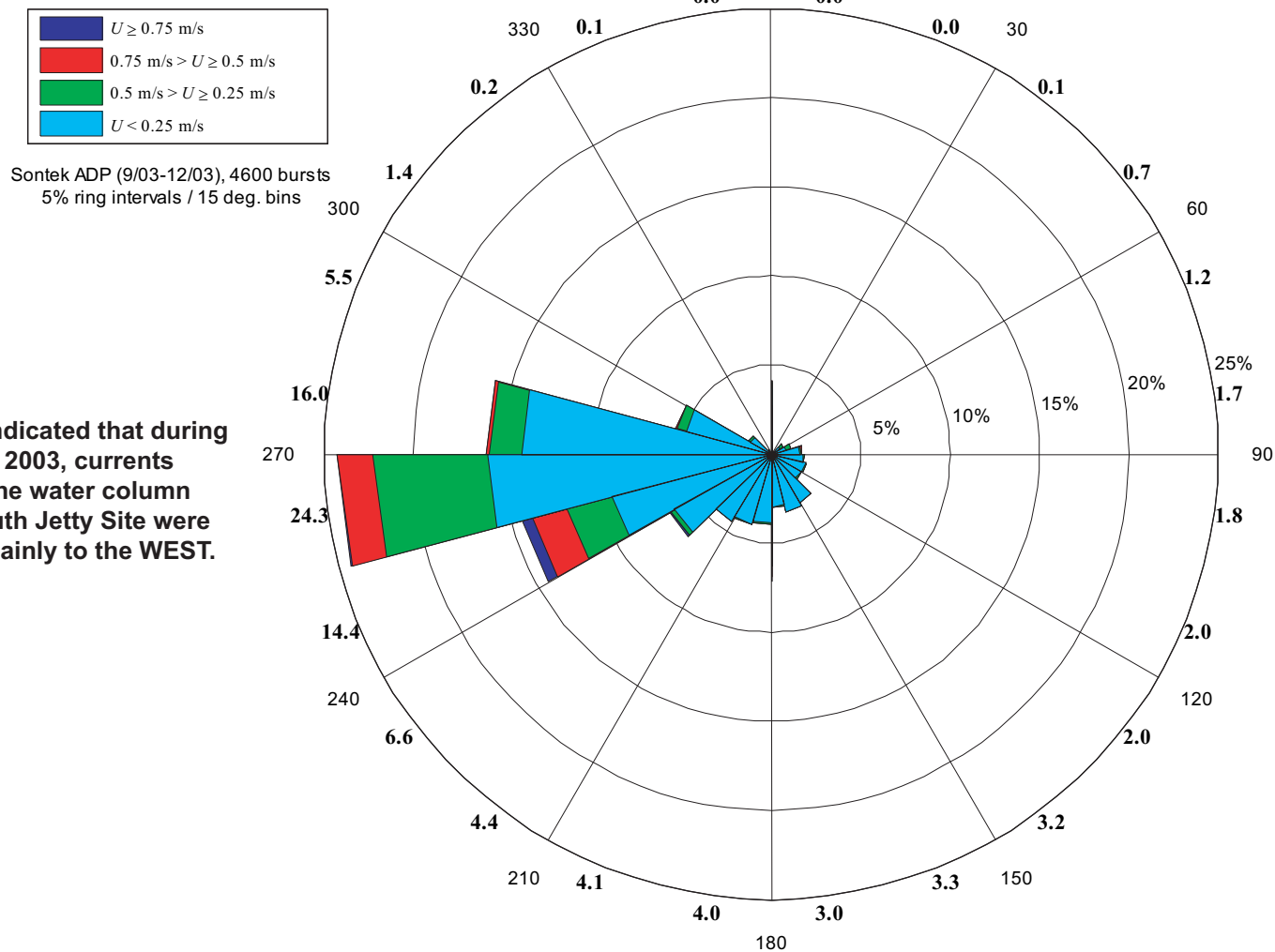


Figure D-4. Depth Averaged Currents (elevation 1.6–14 m above sensor)



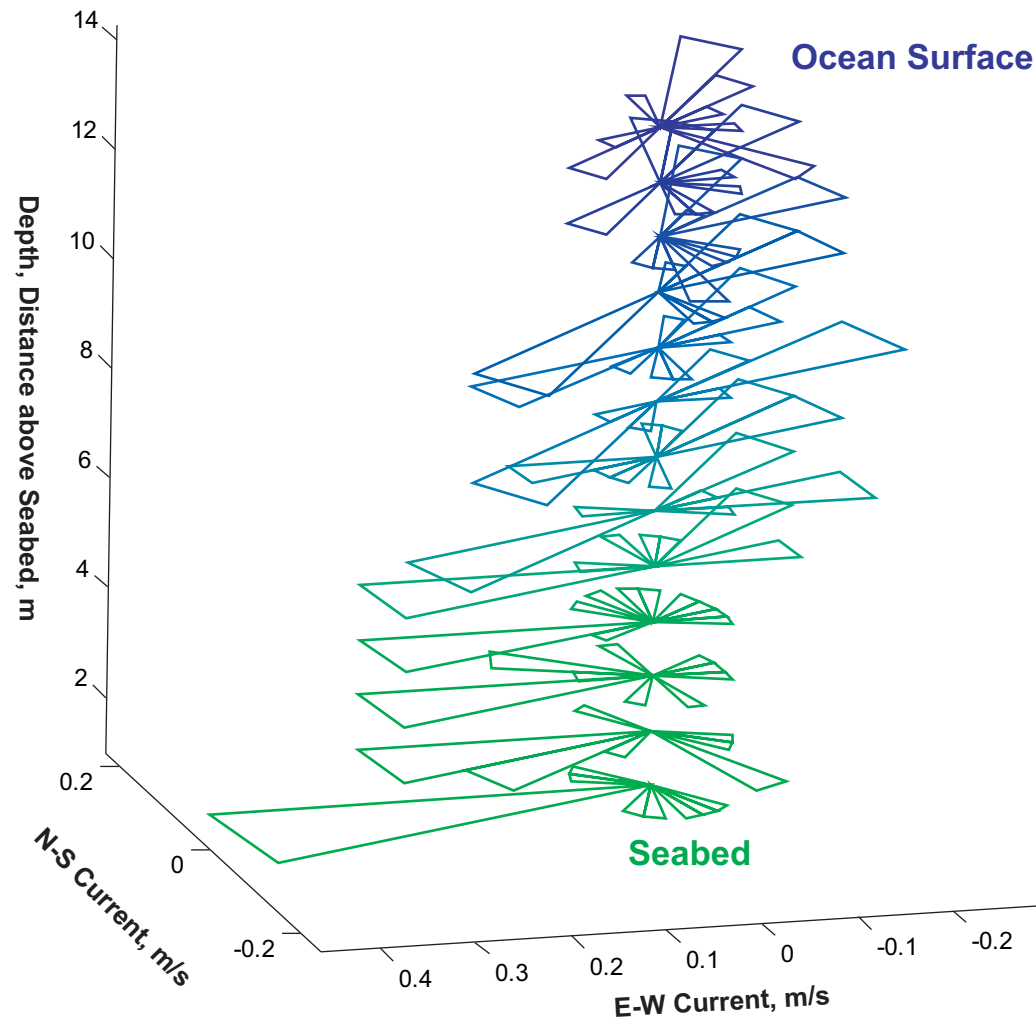


Figure D-5. Distribution of Current through Water Column at South Jetty Site during Sept–Nov 2003



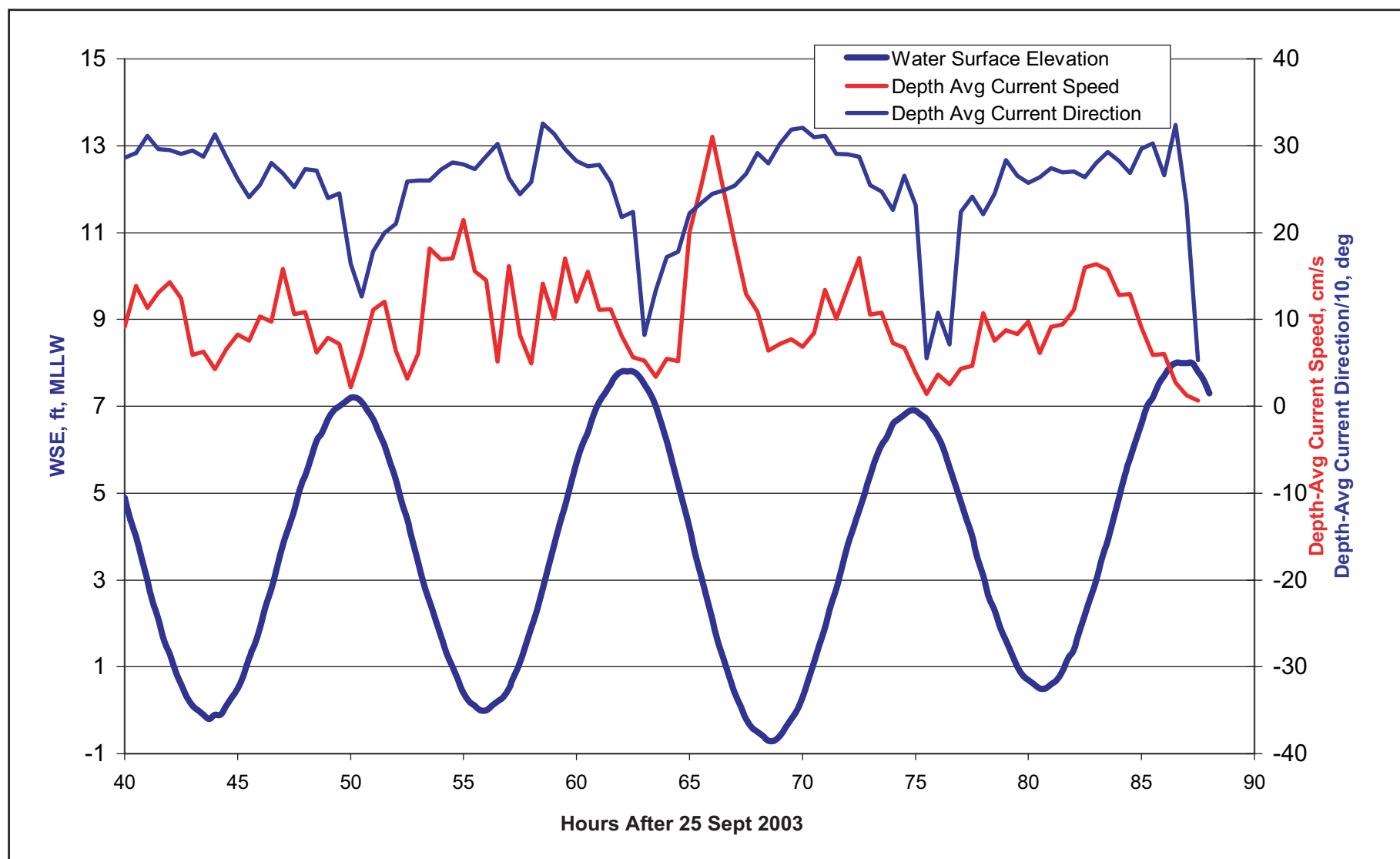


Figure D-6. Observed Tide and Depth Averaged Current at MCR South Jetty Site during 27–28 Sept 2003 (used to simulate 2005 disposal)



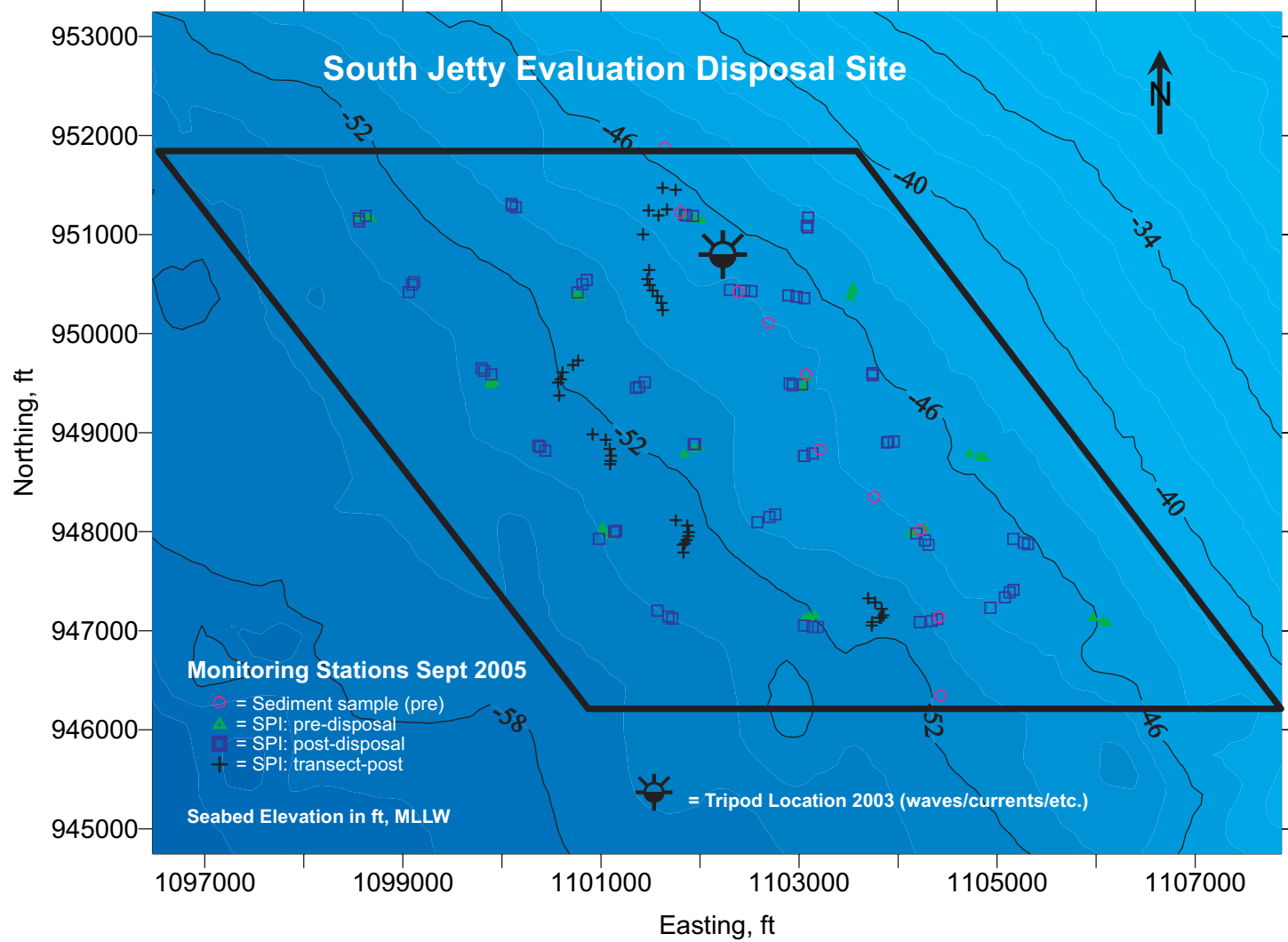


Figure D-7. South Jetty Pilot Study Disposal Site



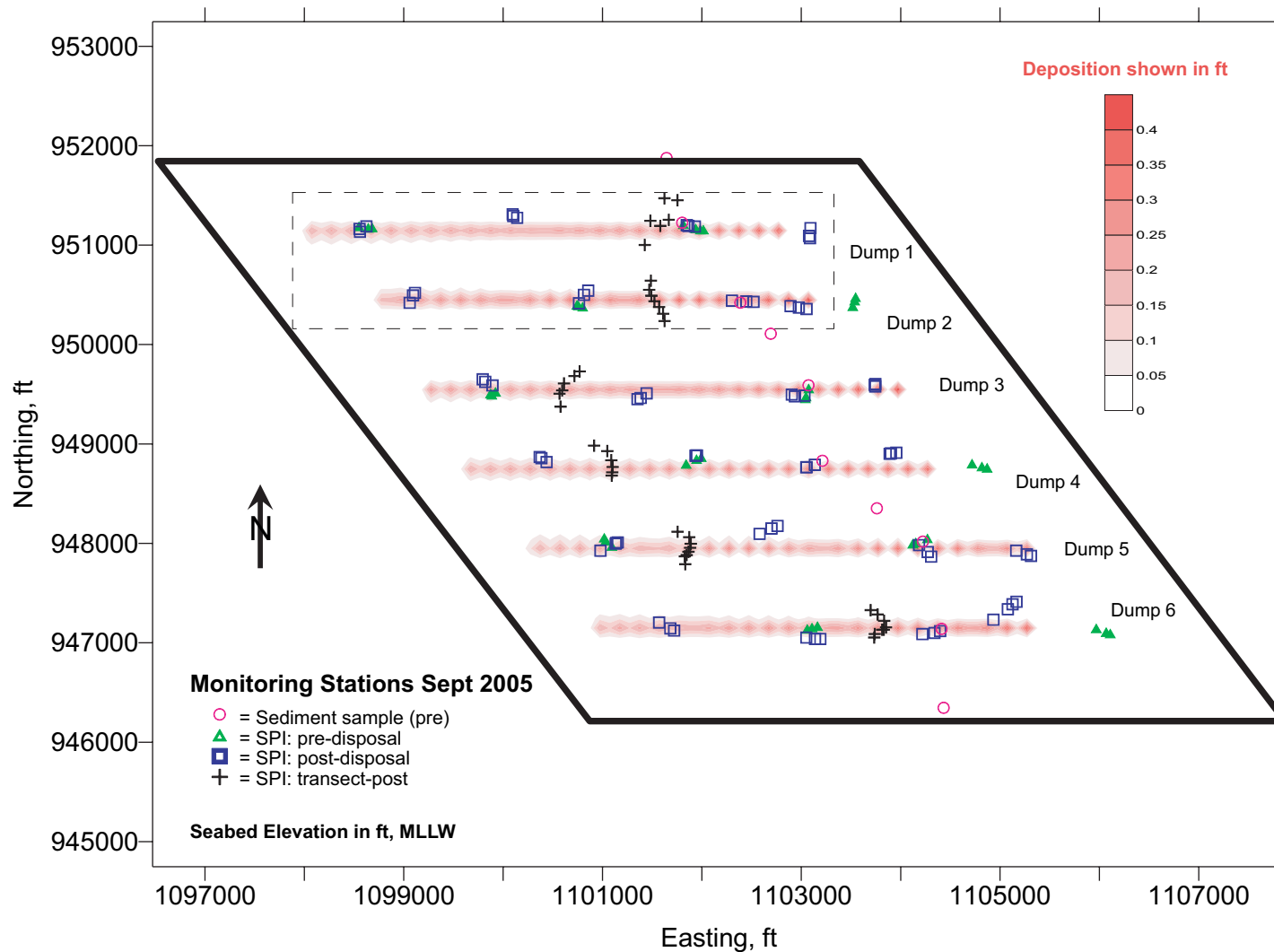
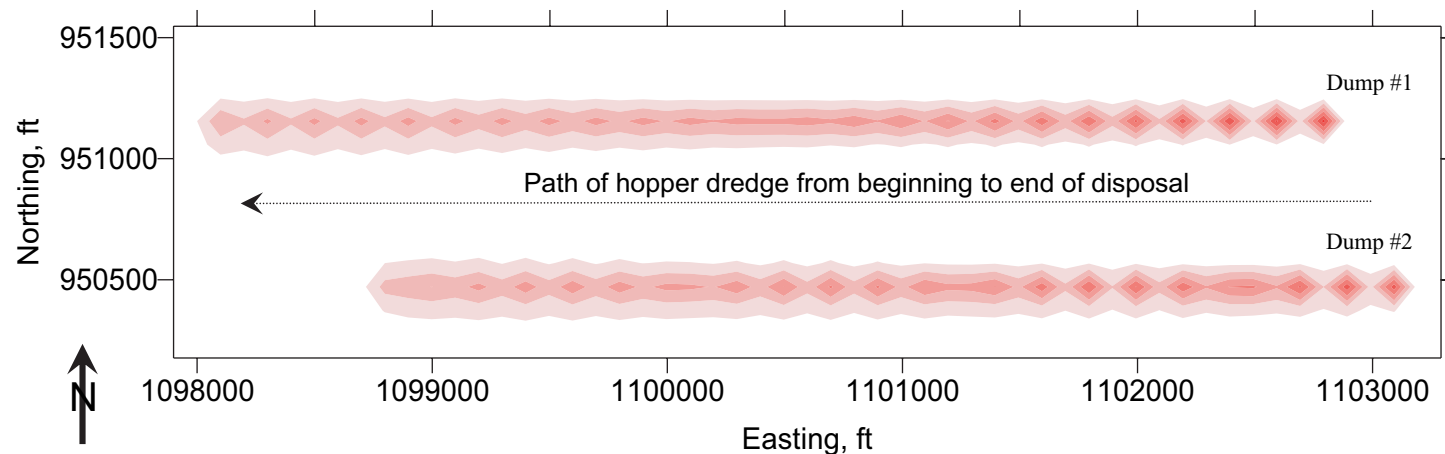


Figure D-8. MDFATE Model Simulation of Dredged Material Distribution on Seabed at South Jetty Site for Six Disposal Events Conducted by Hopper Dredge Essayons during 14–15 Sept 2005





Deposition shown in ft	Dump 1(1256): 5,000 cy placed 14 Sept 2005: 11:16 - 11:25 am, Avg vessel speed = 9.0 ft/sec tide elevation = 5.3 ft MLLW, depth averaged current = 6 cm/sec at 223 deg
0.3	Dump 2(1257): 5,000 cy placed 14 Sept 2005: 14:04 - 14:12 am, Avg vessel speed = 9.2 ft/sec tide elevation = 3.8 ft MLLW, depth averaged current = 11 cm/sec at 290 deg
0.25	Dump 3(1258): 5,000 cy placed 14 Sept 2005: 17:06 - 17:16 am, Avg vessel speed = 8.1 ft/sec tide elevation = 3.1 ft MLLW, depth averaged current = 7 cm/sec at 226 deg
0.2	Dump 4(1259): 5,000 cy placed 14 Sept 2005: 19:43 - 19:52 am, Avg vessel speed = 8.8 ft/sec tide elevation = 6.4 ft MLLW, depth averaged current = 9 cm/sec at 270 deg
0.15	Dump 5(1265): 5,000 cy placed 15 Sept 2005: 8:58 - 9:06 am, Avg vessel speed = 10.6 ft/sec tide elevation = 3.2 ft MLLW, depth averaged current = 10 cm/sec at 310 deg
0.1	Dump 6(1266): 5,000 cy placed 15 Sept 2005: 11:46 - 11:55 am, Avg vessel speed = 8.3 ft/sec tide elevation = 6.0 ft MLLW, depth averaged current = 7 cm/sec at 70 deg
0.05	
0	

Figure D-9. MDFATE Model Simulation of Dredged Material Distribution on Seabed at South Jetty Site

